

CLAIMS

1. Process for the preparation of an oxidic catalyst composition consisting of one or more trivalent metals, one or more divalent metals and - calculated
5 as oxide and based on the total composition – more than 18 wt% of one or more compounds selected from the group consisting of rare earth metal compounds, phosphorus compounds, and transition metal compounds, which process comprises the following steps:
- a) preparing a precursor mixture consisting of (i) a compound 1 being one
10 or more trivalent metal compounds, (ii) a compound 2 being one or more divalent metal compounds, (iii) a compound 3 which is different from compounds 1 and 2 and is one or more compounds selected from the group consisting of rare earth metal compounds, phosphorus compounds, and transition metal compounds, and (iv) optionally water,
15 which precursor mixture is not a solution,
- b) if the precursor mixture contains water, optionally changing the pH of the slurry,
- c) optionally aging the precursor mixture,
- d) drying the precursor mixture when this mixture contains water and/or
20 aging step c) is performed, and
- e) calcining the resulting product.
2. A process according to claim 1 wherein the precursor mixture of step a) is sodium-free and the optional pH change in step b) is performed by the
25 addition of ammonium hydroxide.
3. A process according to claim 1 or 2 wherein the precipitate is aged in step c) without anionic clay being formed.
- 30 4. A process according to any one of claims 1-3 wherein the divalent metal of compound 2 is selected from the group consisting of Mg, Ca, Ba, Zn, Ni, Cu, Co, Fe, Mn, and mixtures thereof.

- 5 5. A process according to claim 4 wherein the divalent metal is magnesium and compound 2 is selected from the group consisting of magnesium magnesium oxide, magnesium hydroxide, magnesium carbonate, magnesium hydroxyl carbonate, and mixtures thereof.
- 10 6. A process according to any one of the preceding claims wherein the trivalent metal of compound 1 is selected from the group consisting of Al, Ga, Fe, Cr, and mixtures thereof.
- 15 7. A process according to claim 6 wherein the trivalent metal is Al and wherein compound 1 is selected from the group consisting of aluminium oxides, aluminium trihydrate, thermally treated aluminium trihydrate, gel alumina, boehmite, and mixtures thereof.
- 20 8. A process according to claim 6 wherein the trivalent metal is Fe and wherein compound 1 is selected from the group consisting of iron oxides and iron hydroxides.
- 25 9. A process according to any one of the preceding claims wherein compound 3 is a compound comprising a metal selected from the group consisting of Cu, Zn, Zr, Ti, Ni, Co, Fe, Mn, Cr, Mo, W, V, Ce, La, and mixtures thereof.
- 30 10. A process according to any one of the preceding claims wherein compound 3 is introduced into the precursor mixture by using a compound 1 that has been doped with compound 3 and/or a compound 2 that has been doped with compound 3.
11. A process according to any one of the preceding claims wherein compound 3 is present in the composition in a total amount of 18 to 60 wt%, calculated as oxide and based on the total composition.

12. Oxidic catalyst composition obtainable by the process according to any one of the preceding claims.

13. Catalyst particle comprising the oxidic catalyst composition according to
5 claim 12, a matrix and/or filler, and a molecular sieve.

14. Use of the oxidic catalyst composition of claim 12 or the catalyst particle of claim 13 in a fluid catalytic cracking process.